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(54) SUBSTRATE FOR ELECTRONIC ELEMENT AND MANUFACTURE THEREOF

(57)Abstract:

PURPOSE: To make it possible to form the title substrate into a large area as well as to prevent the generation of a stepping and a disconnection in stepped part by a method wherein the title substrate consists of a substrate having the surface of low density of nuclei formation and a plurality of single crystals grown from a plurality of seed single crystal, and the surface of the single crystal and an insulator are flattened, and they are substantially formed on the same plane surface.

CONSTITUTION: An inorganic component such as SiO_2 solution, for example, is coated on the deposition surface 1 whereon a semiconductor crystal 2 constituting an electronic element using the ordinary spin-coating method, a dipping method and the like in such a manner that the coated part becomes flat. Then, etching is conducted under the condition that the etching speed ratio of the coated film and the semiconductor grain becomes almost equal. Pertaining to etching gas, CF_4 , the mixed gas of CHF_3 , CH_2F_2 , CHF_3 and the like, or O_2 , Ar, He and the like is used, and the etching is conducted in the pressure of 0.1W1Torr. A smooth surface can be obtained using a mechanical polishing method. After the surface have been made flat, an inorganic insulating film 3 remains between semiconductor islands 2, and the adjacent semiconductor islands 2 are electrically insulated completely.

